A Critique on Classroom Observation Techniques in Evaluating Teacher Performance and Student Satisfaction

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Abstract: This paper examined the training needs of teachers (in Singapore private institute contexts) based on classroom observation techniques, and recommended suitable areas for teacher development. A predictive model based on observation of a teacher's classroom would be more proactive, requiring the college to investigate and explore reasons contributing to assessment failure rate. Teachers' teaching quality emerged as one of the key influencing factors even though there are many other influences, including college policies, physical environment, classroom learning atmosphere, and curriculum designs. Furthermore, providing students with good quality education would enhance their learning performance and enable them to achieve better results. Overall, by observing teachers' ability to manage classrooms, teach, and implement lessons, provide feedback and evaluate students, and demonstrate professional qualities, the college can create and execute suitable interventions and support systems to improve teacher and student satisfaction.

Keywords: lesson observation, teacher teaching, classroom management, lesson delivery and management, feedback and evaluation, professional qualities, teacher identity, teacher practices and knowledge, and cultural influences.

1. Introduction

Service quality is one of the most prominent business research topics where organizations utilised it to improve their relationship and attract both existing and new customers (Gallifa & Batalle, 2010). This capability to deliver beyond customers' expectation service quality will ensure optimal customer satisfaction (Anderson, Fornell & Lehmann, 1994). Correspondingly, Higher Education Institutions would consider student satisfaction in the form of academic success as their top priority (Winberg & Hedman, 2008). Furthermore, the main objective of the EduTrust Certification Scheme managed by the Committee for Private Education (CPE) in Singapore is to improve the industry standard and to enhance student outcomes in Singapore private education industry. The committee has highlighted various factors that would promote maximum student satisfaction such as the college infrastructure and facilities, student support and service, academic resources, delivery and mode of assessment, and quality of teaching (CPE, 2022).

Cheng (2016) in his research work established the link between student satisfaction and quality education, and Ko and Chung (2014) confirmed that there is a significant positive correlation exists between teacher's teaching quality and student's learning satisfaction i.e. the teacher teaching quality would elevate students' academic performance (Snehi, 2011). Consequently, Private Education Institutes would want to know whether a highly functional classroom environment could be structured and maintained through teachers' instructional practices and teaching abilities (Steinberg & Garrett, 2016) to promote optimal student learning. One of the common methods for assessing teacher teaching is through classroom observation (Zaare, 2012) using a prescribed assessment scoring system. Therefore, this paper aimed to determine the effectiveness of the classroom observation technique in assessing teaching performance and student satisfaction and to propose suitable areas of teacher development.

Classroom observation according to Bailey (2001) is a systematic process of data collection and analysis to examine the instructor's teaching and/or student's learning actions. In this most commonly used procedure, the experienced and trained observer could objectively record all the activities students and teachers do during a given time interval without any high judgments about the behaviours observed. This evaluation exercise is essential and vital for colleges with diverse students' demographics and academic abilities. Consequently, all teachers are expected to constantly vary their teaching methodologies and pedagogies to meet the different levels of academic needs, especially among the under-performed students with poor background knowledge. Still, some lecturers failed to cope and adapt to the changes and left the college.

Hence, this paper aimed to explore the classroom observation techniques in evaluating current teaching practices (in Singapore private institute settings) to determine teachers' training needs and to propose suitable areas of teacher development. Additionally, although the college has investigated and examined the possible reasons contributing to the student assessment failure rate, it would be more proactive to develop a predictive model to predict the student performance based on teacher's classroom observation. Although there are numerous factors, such as college policies, physical environment, classroom learning atmosphere, and curriculum designs, teachers' quality of teaching emerged as one of the key influencing elements (Astin, 1993; Kember, 2004). Furthermore, Ko and Chuang (2014) deduced that good teaching quality could enhance learning performance and enable students to attain better results and higher learning satisfaction. In sum, by observing teachers' skills in classroom management, lesson delivery and management,

feedback and evaluation, and professional qualities, the college management could better develop and implement effective interventions and support systems to counter this phenomenon to improve teacher and student satisfaction and retention rate.

2. Key characteristics of current classroom observation factors

The protocols used in the current classroom observation checklist form was reviewed. This formed was generally designed by the college management and academic faculties based on their prior educational and administrative experience. Collaboratively, the following four factors which were viewed and considered to be the essential factors that would influence and contribute to teacher performance, and student learning/satisfaction in a private college were identified.

Classroom Management

According to Doyle (1986) and Brophy (1996), classroom management aims to successfully create, plan, organise, provide, instruct, and maintain a conducive learning environment for learners, to promote and support an orderly classroom (Crookes, 2003) for teaching and learning. It also involved the establishment and reinforcement of college rules and regulations, imposition of disciplinary actions, establishment of an effective teacher and student relationships, and development of an effective management perspective in problem-solving (Marzano, 2003). In the selected college context, during the classroom observation, the observers and students will observe how the teachers involved prepare and set up the physical teaching environment to ensure the adequacy of facilities and resources i.e. how effective have they utilised suitable teaching aids such as Information Technology, media, and resources (Ertmer, 1996)?

Besides, are there visible efforts showing their constant interaction with the students for rapport building, and creating a supportive learning environment (Papay, 2011)? Did the teacher set and enforce classroom rules and routines effectively to reinforce good behaviour, and deter bad ones (Wentzel, 2002)? Lastly, as a requirement indicated in the EduTrust Guidance Document (CPE, 2022), private education institute is expected to examine and monitor student learning and take suitable and timely intervention strategies for students who have not met the required standards of achievement.

Lesson Delivery and Management

Tyler (1950) presented the four processes in lesson planning as the identification of the school's goals, selection of appropriate teaching methodologies and learning experiences to attain the stated goals, organisation of instructional experiences, and assessing how the effective objectives were met. The selected college took a reference to this guiding principle, consequently, in every lesson planning,

they have included a process of identifying the lesson objective, planning to meet the objective, and evaluating students' learning. All teachers are required to define the objectives for their class presentation, and effectively organise their learning situations to meet these objectives (Ball et al., 2007). The observed teachers must also show the ability to confidently explain and effectively communicate important ideas or concepts in the subject matter simply and clearly with acceptable teaching speed and pace (Visser, 2006), and establish eye contact (Taylor & Sobel, 2011) with their students at all time, especially in responding to students' questions and comments. Furthermore, they are expected to stimulate and demonstrate enthusiasm for the subject matter (Moore, 2009) relating to practical issues and using instructional methods to encourage active student participation in the learning process and encourage critical thinking and analysis which will enhance their academic achievement (Justin & Karla, 2017).

Feedback and Evaluation

Srichanyachon (2012) showed that teacher and student could create a dialogue to communicate with each other through written feedback which is purposed to clarify and correct learners' thoughts to engage and motivate them (Bitchener, 2008). It is a requirement under EduTrust Certification Scheme that Private Education Institutes are expected to collect, respond to and analyse feedback (especially from students) promptly, but it will be too late if the data was collected at the end of the academic term through Student Satisfaction Survey. Instead, the selected college expects all teachers to obtain feedback from students during and after the lesson, so that their understanding and concerns could be addressed immediately. Hence, the observers should confirm whether the teachers have given suitable and timely feedback to their students. Bain (2004) derived that when students' opinions and feedback were acknowledged and encouraged, their sense of self-efficacy and self-esteem would be increased. Hence, teachers should empathise and be sensitive towards under-performed students with personal or academic issues. This could, in turn, strengthen the student/instructor relationship, and students would feel more optimistic about their academic success and would be more willing to engage or reach out for assistance. It was in this light that the observers should look for evidence of the teacher's ability to use appropriate and varied teaching methodologies (Burton, 2003) to interact with students through evocative class activities, assignments and/or projects (Humphrey et al., 2006) which would like to help them to achieve their learning objectives and satisfaction.

Professional Qualities

Lipka and Brinthaupt (1999) claimed that although it might not be conclusive that a teacher's personality would affect students' achievements or attitude, it would set a positive emotional climate in the classroom i.e. a more inviting tone that promotes student learning. Murray, Rushton, and Paunonen (1983) claimed that, after two

separate studies, an effective teacher has characteristics such as open-minded, friendly, showing leadership, extraverted, not easily worried, objective, supportive, non-dictatorial, non-defensive, smart, and aesthetically sensitive were strongly related to positive student attitudes. Hence, the observers, during the classroom observation exercise, should look for evidence of teachers demonstrating warmth and enthusiasm, and their responsiveness to feedback, apart from being punctual for the lesson and dressed professionally.

Theoretical framework

A theoretical framework serves as a blueprint and a structural tool purposed to connect and interrelate the proposed theoretical assumptions and research concepts, to present an overall plan for the research and shape the expected research objectives. It will be used as a guideline to promote the systematic execution of the research process and to shape the quality and scope of the investigation (Johnson and Henderson, 2012; AERA, 2006). Consequently, the proposed theoretical framework of this paper, based on the stated literature review, was represented in figure 1:

Figure 1: The Theoretical Framework
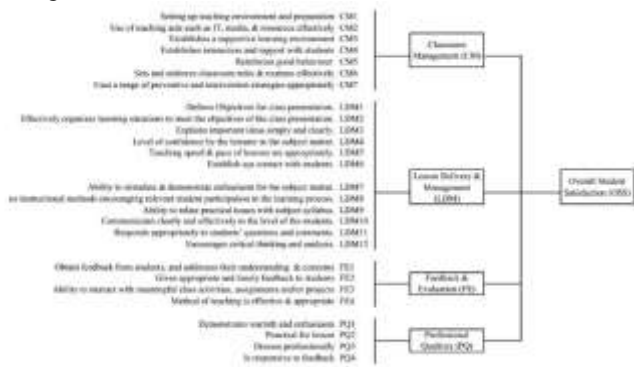
Source: developed for this paper

3. Example of use

In this section, an example of the use of the current classroom observation protocols in evaluating the newly employed teachers were described and presented. The following research questions were investigated in this paper with reference to the derived theoretical framework: What are the influencing effects of classroom management, lesson delivery and management, feedback and evaluation, and professional qualities on overall student satisfaction?

Research Instruments and Data Collection Method Considerations

A standardised survey questionnaire was used to collect relevant data for statistical analysis tests to quantify defined hypotheses (Nijstad, 2009). To ensure complete and accurate information from participants, the questionnaire should be carefully formulated in terms of conciseness and simplicity to maintain the respondent's interest level, and in turn, they will provide accurate, complete, and unbiased opinions (Anderson

& Morgan, 2008). The survey questionnaire was designed based on the theoretical framework deduced from the respective literature reviews.

The constructs of Classroom Management (CM), Lesson Delivery and Management (LDM), Feedback and Evaluation (FE), Professional Qualities (PQ), and Overall Student Satisfaction (OSS) were included in the formulated questionnaire survey which was used by the two observers and distributed to all participating students during a classroom observation. A five-point Likert scale was used to collect the response set ranging from 'Excellent' (5) to 'Poor' (1). As this survey was purposed to gather and generate data for overall student satisfaction which would imply the teacher performance, it did not cover any specific demographic variables such as gender, age or nationality. In this study, the observations were conducted from September to October 2021 for the newly employed lecturers and generated 126 responses with no missing data.

The research hypotheses on the impact of the various observation factors on the overall student satisfaction were verified using Confirmatory Factor Analysis (CFA) with Partial Least Square Regression (PLS) Path Model (using SmartPLS 2.0 programme). Chin and Marcoulides (1998) stated that the PLS Path Model could be used to derive a structural equation model (SEM). In this paper, CFA was first performed to measure the suggested model and analyse its multi-item constructs, construct validity, and Reliability. Hypotheses testing was later analysed based on the proposed structural model using Statistical Package for the Social Sciences (SPSS).

4. Findings and Discussions

Some of the most significant psychometric concerns that should be used in any classroom observation protocols were briefly reviewed.

Confirmatory Factor Analysis

CFA was first conducted to analyse the proposed measurement model. To determine the suitability of the individual measuring items and the model as a whole, the convergent validity, discriminant validity, and internal consistency were evaluated (Jeong, 2012).

Goodness of Measures

Sekaran (2003) stated that the data collected must be tested for the goodness of fit measures in terms of validity and reliability. Validity refers to the degree to which the proposed test accurately reflects the specific theoretical concept that this paper attempts to measure to avoid inaccurate and misinterpreted conclusions (Dane, 2010). Conversely, reliability indicates how stable and consistent the instrument measures the concepts (Shuttleworth, 2009).

Construct Validity

The purpose of the construct validity is to determine the extent to which the items in a scale measure only the same construct. It also examines whether the instrument used has measured the theoretical construct that it is designed to measure based on the concepts supporting the research (Lodico et al., 2010). Convergent validity measures the extent to which multiple items measuring the same concept are in agreement (Hair et al., 2010). It was verified by accessing the factor loadings, composite reliability, and average variance extracted. To achieve a level of validity, the loading for all items should exceed the recommended value of 0.5. The composite Reliability (CR) value confirms the degree to which the construct indicators show the latent. From Table 1, all the CR values ranged from 0.95 to 1.00 which was above the recommended value of 0.70 stated by Hair et al. (2010). Furthermore, to justify the use of a construct, the average variance extracted (AVE), which measures the variance between the indicators relative to the measurement error, should be greater than 0.50 (Barclay et al., 1995). Table 1 showed that AVE of this construct ranged between 0.69 and 1.00.

Table 1: Results of the measurement model

Model Construct	Measurement Item	Loading	t-value	Composite Reliability	Average Variance Extracted (AVE)
Classroom Management (CM)	CM1	0.88	12.94	0.94	0.69
	CM2	0.69	6.96		
	CM3	0.79	7.29		
	CM4	0.87	8.40		
	CM5	0.87	11.79		
	CM6	0.81	8.50		
	CM7	0.91	10.51		
Feedback & Evaluation (FE)	PE1	0.82	11.41	0.95	0.82
	PE2	0.96	78.29		
	PE3	0.90	35.94		
	PE4	0.95	77.96		
Learning Delivery & Management (LDM)	LDM1	0.73	12.60	0.95	0.63
	LDM2	0.82	10.04		
	LDM3	0.80	14.47		
	LDM4	0.74	18.28		
	LDM5	0.74	17.80		
	LDM6	0.80	11.03		
	LDM7	0.84	22.90		
	LDM8	0.78	21.43		
	LDM9	0.74	11.87		
	LDM10	0.87	19.01		
	LDM11	0.86	13.65		
	LDM12	0.76	10.42		
Professional Qualities (PQ)	PQ1	0.89	26.35	0.95	0.84
	PQ2	0.89	22.32		
	PQ3	0.93	53.75		
	PQ4	0.95	74.60		
Overall Student Satisfaction (OSS)	OSS	1.00		1.00	1.00

Source: developed for this paper

In sum, these results confirmed that all 5 constructs i.e. Classroom Management (CM), Lesson Delivery and Management (LDM), Feedback and Evaluation (FE), Professional Qualities (PQ), and Overall Student Satisfaction (OSS) were all valid measures of their respective constructs based on their parameter estimates and statistical significance.

Reliability Analysis

Cronbach's Alpha Coefficient was used to measure the inter-item consistency or reliability of the variables used in

this paper. Table 2 summarised the loading and alpha values. All the alpha values were above 0.70, and the composite reliability value ranged from 0.70 to 0.95 (Table 2). Henceforth, the internal consistency reliability is considered acceptable and the measurements are reliable.

Table 2: Results of the reliability testing

Model Construct	Loading Range	Cronbach's Alpha	Number of items
Classroom Management (CM)	0.70-0.91	0.93	7
Lesson Delivery and Management (LDM)	0.73-0.87	0.93	12
Feedback and Evaluation (FE)	0.82-0.96	0.95	4
Professional Qualities (PQ)	0.88-0.95	0.94	4
Overall Student Satisfaction (OSS)	1.000	1.000	1

Source: developed for this paper

In sum, the findings derived that the theoretical underpinning of a construct i.e. the classroom observation form must be taken into consideration together with the test results. It was concluded that the observation protocols attained both construct validity and reliability.

Hypothesis Testing

The four hypotheses in this paper were analysed using ANOVA, and the compiled results were presented in Table 3:

Table 3 Summary of Hypothesis Testing

Hypothesis	r	r^2	Standard Error	t	Sig.	Remark
H1: Classroom Management (CM)→OSS	0.453	0.205	0.370	6.608	.000	Adopted
H2:Lesson Delivery and Management (LDM) →OSS	0.565	0.319	0.313	6.910	.000	Adopted
H3:Feedback and Evaluation (FE) →OSS	0.661	0.437	0.287	6.037	.000	Adopted
H4:Professional Qualities (PQ) →OSS	0.832	0.692	0.059	16.698	.000	Adopted

Source: developed for this paper

From the table, it was observed there is a strong and positive correlation (r=0.832 and r=661) between Professional Qualities (PQ) and Overall Student Satisfaction (OSS) (r^2=0.692, t=16.698, n=126, p<0.001), and Feedback and Evaluation (FE) and Overall Student Satisfaction (OSS) (r^2=0.437, t=6.037, n=126, p<0.001). This implied that around 69% and 44% of the variance in overall student satisfaction can be explained by the lecturer's professional quality, and feedback and evaluation skills respectively. Conversely, there is a moderate but positive correlation (r=0.453 and r=0.565) between Classroom Management (CM) and Overall Student Satisfaction (OSS) (r^2=0.205, t=6.608, n=126, p<0.001), and Lesson Delivery and Management (LDM) and Overall Student Satisfaction (OSS) (r^2=0.319, t=6.910, n=126, p<0.001). This implied that only around 20% and 32% of the variance in overall student satisfaction can be explained by the lecturer's classroom management ability and lesson delivery and management skill. Furthermore, as the p-value of the respective factors was <0.001, we can conclude that Classroom Management (CM), Lesson Delivery and Management (LDM), Feedback and

Evaluation (FE), and Professional Qualities (PQ) have an impact on the Overall Student Satisfaction (OSS).

In summary, the results confirmed that the current model constructs found in the teacher evaluation form (classroom observation) used to collect student's satisfaction in teacher performance during the teacher observation is effective in measuring the student overall satisfaction level which is influenced by the respective teacher teaching activities.

5.   Shortcomings and Limitations

In the current practice, to uncover and determine the significant issues observed on teaching practices and effectiveness, the selected college has been collecting quantitative data based on the detailed observations and students' opinions during the actual classroom observations, and professional dialogue. Nevertheless, the current protocols have not considered the element of teacher identity, teacher practices and knowledge, and cultural influences.

Teacher Identity

Although the current protocols measure the 'Professional Qualities' of the observed teachers, the criteria used such as whether the teachers could 'demonstrate warmth and enthusiasm', 'punctual for lesson', 'dress professionally', and are 'responsive to feedback' failed to measure the true identity of the teacher which could influence the work of teaching.

Day and Kington (2008) stated that the teacher identity could be understood in both the technical and emotional aspects, and most importantly how they interact with the external forces such as the social, cultural, and college environment. Furthermore, constant tensions and influences exist between the three teacher identities i.e. professional, situated, and personal. Hence, during the classroom observation, teachers should be evaluated on their professional identity in terms of the various expectations set by the college policies, and society. As for the situated identity, the teacher would be assessed within the college, department, and classroom context concerning their behaviour and feedback received from the students. As for personal identity, more of a self-reflection exercise, the teacher would consider their lives and roles they play outside of school.

Kelchtermans (2009) viewed that teaching as a relational, social and public activity, and the teacher identity has a strong influence on teacher teaching and the professional self-understanding in terms of knowledge, skills, and attitudes. Also, the teacher's self-understanding consisted of five components i.e. self-image, self-esteem, job motivation, task perception and future perspective which should be evaluated.

Teacher practices and knowledge

In the current classroom observation, the teachers were observed under the criteria 'Lesson Delivery and Management' for their teaching practices. However, the criteria used lacked depth as they merely measure the extent the observed teachers 'defined lesson objectives for class presentation', 'explained important ideas simply and clearly', 'level of confidence by the lecturer in the subject matter', 'appropriate teaching speed and pace', 'established eye contact with students', 'stimulated and demonstrated enthusiasm for the subject matter', 'used instructional methods to encourage student participation', 'able to relate practical issues with subject syllabus', 'communicated clearly and effectively to the level of the students', 'responded appropriately to students' questions and comments', and 'encouraged critical thinking and analysis'.

Instead, the assessment criterion should include the four components derived by Chen (2009): subject, problem situations, reflection-in-action, and beliefs. Here, the teachers should be evaluated on their abilities to derive and own practical knowledge, to handle and solve puzzling problems, to gather and reflect on the problem-solving experience, and to develop a new belief. According to Shulman (1986), an effective teacher should be able to organise, adapt, and present practical content knowledge by blending content knowledge and pedagogy that would help students to understand this knowledge. Moreover, the teachers should be evaluated on their degree of incorporating the different forms of knowledge into their lessons i.e. content knowledge, general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge, knowledge of learners and their characteristics, knowledge of educational contexts, and knowledge of educational aims, goals, purposes, values. Lastly, all teachers should be observed on whether they could comprehend, transform, instruct, evaluate, and reflect to enhance their pedagogical reasoning skills.

Cultural influences

Stigler and Hiebert (1998) wrote about teaching as a cultural activity and a system that was highly stable and difficult/unlikely to change. Given this, newly employed teachers should be evaluated on their ability to adapt to the core beliefs of the college which could be different from their previous place of employment in terms of how students learn and the roles of teachers. They could be assessed based on their ability to adjust and adapt with their constant interactions with the students, curriculum and the local settings such as college goals, studying/teaching materials, lesson schedules, and any other factors that would affect how they would teach. They were expected to avoid cultural bias and stereotyping especially in a multicultural setting.

It was unavoidable that both teachers and students from various countries brought along their traditions, life experiences, customs, and cultures into the classroom, which in turn created certain suppositions and beliefs about how a great teacher should be. Especially for the newly employed teacher, they would like to use their prior knowledge, theory, and education research to prepare and conduct their lessons. Additionally, they would also rely on their personalities and teaching styles that were moulded by previous social and cultural interactions to socialise in the new college which

would have a direct influence on their daily routines and experiences in the classroom. Nonetheless, the college would experience a cultural disconnect when students and students from different cultures intermingle together. On the other hand, when teachers were culturally responsive, they could make use of the differences to investigate and uncover the school curriculum to build a richer, deeper, and more robust learning environment. In sum, the new teachers should be observed on their ability to manage a socially and culturally diverse group of students and colleagues.

6. Conclusions

This paper purposed to investigate the effectiveness of the current classroom observation techniques in measuring the teacher teaching performance and student learning satisfaction. Through analysing the data collected during the observation conducted on four newly employed teachers, it was verified statically that the observation protocols used was valid and reliable. Nevertheless, with reference to the respective teacher teaching supporting literature, it was induced that the observation criteria could include factors such as teacher identity, teacher practices and knowledge, and cultural influences which have an impact on the teacher teaching. Hence, these criteria should be included in the classroom observation to enhance the accuracy of the study.

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